

Appl. No. 10/726,812
Amtd. dated June 1, 2006
Reply to Office Action mailed December 2, 2005

PATENT

REMARKS/ARGUMENTS

Claims 1-15 have been amended, and claims 28-34 have been added. Thus, after entry of this amendment, claims 1-34 will be pending in this application. No new subject matter has been added.

Claims 1-14 stand rejected under 35 U.S.C. 112 and 101.

Claims 1-10, 13, 15-19, 21-24 and 27 stand rejected under 35 U.S.C. 102(e) as being anticipated by Lu (US 2004/0073747).

Claims 11, 12, 25 and 26 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Lu in view of Frank et al. (US 2004/0160975).

Claim 20 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Lu in view of Gajjar (US 5,787,463).

Claim 14 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Lu in view of Brantley Jr. et al. (US 5,163,149).

Rejection under 35 USC § 112, indefiniteness

Claims 1-14 are rejected under 35 USC § 112, ¶ 2, as being indefinite with regards to the term "a physical device object." Two instances of the term "physical device object" have been clarified with a preceding "first" and "second", respectively. Accordingly, Applicant respectfully requests withdrawal of the rejection.

Rejection under 35 USC § 101

Claims 1-14 are rejected under 35 USC § 101 for being directed to non-statutory subject matter as no physical embodiment of the software devices is given. As amended, claim 1 recites a "computer-readable medium containing a storage disk device driver architecture for access by a processing system, wherein the architecture comprises." As claim 1 now recites a physical embodiment, Applicant respectfully requests withdrawal of the rejection. *See In re Lowry*, 33 E 3d. 1579 (Fed. Cir. 1994) and *In re Beauregard*, 53 E 3d. 1583 (Fed. Cir. 1995).

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Rejection under 35 USC § 102, Lu

Claims 1-10, 13, 15-19, 21-24, and 27 are rejected under 35 USC 102(e) as being anticipated by published U.S. Patent Publication No. 2004/0073747 to Lu.

Claim 1

Claim 1 is allowable as Lu does not disclose or suggest each and every element of claim 1. For example, claim 1 recites "*a plurality of functional device objects, each associated with one disk and adapted to interface with a second physical device object representing that disk.*"

Lu describes a RAID system made of multiple logical disk drive units. See Lu, paragraph 4 lines 10-15 and paragraph 12 lines 2-5. A RAID system is also termed a logical disk drive or a volume. *Id.*, paragraph 12 lines 5-6. In Lu, Figure 2A shows three RAID systems: one each of a RAID0, RAID1, and a RAID5 system. Figure 2B shows volumes 1-3 that correspond to the RAID systems. Each RAID volume is made of sub-drives from physical disk drives 202A-202D. For example, logical disk drive volume 1, which is a RAID5 system, is made of the second sub-drive of 202B and the first sub-drive of 202A, 202C, and 202D. *Id.*, paragraph 34 lines 4-7 and Figure 2A.

The logical disk drives of Lu, each correspond to a traditional RAID system and architecture having multiple disk drive units, such independent sub-drives. Lu does not describe any hardware or software objects in addition to the logical drives made up of sub-drives for use with a RAID system. Particularly, Lu does not teach or suggest "a plurality of functional device objects, each associated with one disk," as recited in claim 1. Furthermore, Lu does not teach or suggest a functional device object "adapted to interface with a second physical device object representing that disk," as further recite in claim 1.

For at least these reasons, claim 1 is allowable over Lu. As claim 1 is allowable, dependent claims 2-14 are also allowable for at least the same rationale.

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PATENTClaim 15

Claim 15 is allowable as Lu does not disclose or suggest each and every element of claim 15. For example, claim 15 recites:

a RAID controller adapted to induce an operating system to load a RAID class driver having a physical device object representing a RAID system comprised of a plurality of disks; and

a first disk controller adapted to interface with at least a portion of the plurality of disks and further adapted to induce the operating system to load a disk controller driver, wherein the disk controller driver is adapted to provide RAID-specific device identifications for the portion of the plurality of disks.

Lu does not describe another controller besides a RAID controller. Specifically, the configuration of sub-drives to form a RAID system suggests the use of a RAID controller. See Lu, paragraph 12 lines 5-10. Thus, Lu does not teach or suggest "a first disk controller" as a separate claim term from a "RAID controller," as recited in claim 15.

Furthermore, in Lu, the RAID configuration information is provided from information stored on the hard drive. See Lu, paragraph 18 lines 16-19; Figure 4; and paragraph 42. Thus, the hard drive provides the RAID information, which requires the hard drive to already have a device ID. In contrast, claim 15 recites "wherein the disk controller driver is adapted to provide RAID-specific device identifications for the portion of the plurality of disks."

For at least these reasons, claim 15 is allowable over Lu. As claim 15 is allowable, dependent claims 16-27 are also allowable for at least the same rationale.

Rejection under 35 USC § 103

Claims 11-12 and 25-26 are rejected under 35 USC 103(a) as being unpatentable over Lu in view of U.S. Patent Publication No. 2004/0160975 to Frank et al.

Claim 20 is rejected under 35 USC 103(a) as being unpatentable over Lu in view of U.S. Patent No. 5,787,463 to Gajjar.

Claim 14 is rejected under 35 USC 103(a) as being unpatentable over Lu in view of U.S. Patent No. 5,163,149 to Brantley Jr. et al.

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Claims 11-12 and 14 depend upon claim 1 and are allowable for at least the same rationale as claim 1. Claims 20 and 25-26 depend upon claim 15 and are allowable for at least the same rationale as claim 15.

The cited teachings of Frank, Gajjar, and Brantley Jr., either alone or in combination, do not make up for the deficiencies in Lu with respect to these claims.

CONCLUSION

In view of the foregoing, Applicant believes all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,



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